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Orthoptics

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Gertrude E. Cromwell,
Supervisor H. E. & School Nursing,
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3335 Main Street, Buffalo 14, New York

Editor
CHARLES H. KEENE, M.D.
University of Buffalo, Buffalo, N. Y.

Assistant Editor
GERTRUDE E. CROMWELL, R.N.
Des Moines, Iowa

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THE JOURNAL OF SCHOOL HEALTH

Devoted to the interests and advancement of school health service and instruction. Your participation by membership is solicited.

Vol. XVII MARCH, 1947 No. 3

REPORT OF THE COMMITTEE ON TUBERCULOSIS, AMERICAN SCHOOL HEALTH ASSOCIATION*

JAY A. MYERS, M.D., *Chairman*
Minneapolis, Minnesota

During and immediately after the war there was considerable disruption of activities of the tuberculosis control programs in the schools. Moreover, a wave of enthusisam developed in many parts of the country for x-ray inspections only of the chest of adults which resulted in curtailment of tuberculosis work in school systems in a good many places and complete abandonment in others. Each state and several of the large cities have continued to have subcommittees on tuberculosis of the American School Health Association, but absences for military service and local situations incident to the war made it impossible for many of these committees to devote the desired amount of time to the schools. In 1946 several of the subcommittees were organized. Apparently uninterested members were replaced by those who had manifested a desire to control tuberculosis in the schools.

Letters, pamphlets, reports, et cetera, were sent to each subcommittee chairman during the year, and the replies indicate that a great deal of tuberculosis work in the schools has been resumed or will be in progress in the near future. From the correspondence it is obvious that the propaganda against tuberculosis work among school children has done considerable harm in several places. Sight has been partially lost of the fact that the child of today is the adult of tomorrow, and what he is taught today is likely to be his basis of accomplishment tomorrow. There has been neglect of the fact that the child who has primary tuberculosis (tuberculous infection) today, may be the ill, contagious adult of tomorrow. Furthermore, among such a child's adult associates there is or has been one or more contagious cases of tuberculosis who should be sought so as to prevent further infection and reinfection of their associates.

In the high school age period, a small percentage of tuberculin reactors have reinfection type of tuberculosis which should be discovered. Among members of school personnel, the incidence of

*Presented before the annual meeting of the American School Health Association, Cleveland, November 11, 1946.

primary and reinfection type of tuberculosis usually does not differ significantly from that found among adults of the same communities engaged in other activities.

The main objective of the Committee on Tuberculosis of the American School Health Association continues to be the creation of an environment in the schools that is free from liberated tubercle bacilli and to participate in other activities that will ensure protection of children against these organisms in their homes and communities outside of school hours. Children and members of personnel learn far more about any subject by actually working with it than through lectures and reading. Therefore, the ideal tuberculosis program should be set up in every school so that periodic examinations, et cetera, become such a part of each individual that they will be continued when school days are over. When this is accomplished in any nation the tuberculosis problem will be practically solved.

There exists no greater opportunity for tuberculosis eradication than that among the 45,000,000 children and more than 1,000,000 members of school personnel in this country. This group constitutes approximately one-third of our entire population and consists of individuals in the most impressionable age of life as well as our professional educators.

In 1946, state and city subcommittees reported tuberculosis control programs in operation in the schools that ranged all the way from nothing but x-ray inspection of the chests of seniors in high schools and some members of personnel to a complete procedure consisting of tuberculin testing of everyone, regardless of age, x-ray inspection of the chests of all reactors among the high school students and personnel, complete chest examination of those with x-ray shadows to determine etiology, and complete examination of all tuberculin reactors for extra-thoracic tuberculosis.

The most effective and promising activity of the year consisted of certification of schools on the basis of tuberculosis control work in progress. The American School Health Association has a certificate form which is available to all state and municipal subcommittees. When a school qualifies, its name is inserted, and the form is signed by the President and Secretary of the American School Health Association and the chairman of the local subcommittee. During the year the subcommittee in Minnesota certified several hundred schools ranging from those in rural areas to entire systems in small cities. It is predicted that within five years every school will be certified. Whenever a group of schools has qualified, rather

elaborate ceremonies are held and the entire public is invited at the time of granting the certificate. These meetings are widely publicized throughout the state. This results in numerous inquiries from uncertified schools. Local pride compels participation in the project. Many persons who have long been in tuberculosis control work declare that this project has done more to stimulate interest and activity throughout the state than any other scheme since organized work began.

When the school certification project was announced in 1945 the qualifications that had been set up in one state were attached. Apparently a good many chairmen of state and municipal subcommittees assumed that these qualifications were required in all states. This was unfortunate because many such chairmen considered the printed qualifications too exacting or not in line with what they thought would be suitable for their states or cities. Therefore they did not undertake the project.

The committee desires to re-emphasize its original statement to the effect that *each subcommittee is free to prepare the qualifications which it considers applicable to its state and would justify certification of all schools that qualify.* These qualifications can be as limited or as extensive as the subcommittee desires. For example, in one state or city the situation may be such that only examination of members of personned may be required. If the subcommittee of such a state regards this adequate under existing conditions all of the schools that qualify may be certified. In other cities or states more extensive requirements may be made, while in some the ideal program can be made a requirement.

Several subcommittees in various parts of the country are now working on qualifications for certification of schools which they hope to institute during 1947. The committee believes that certification of schools should be extended to every school in the nation. This should spell the doom of the transmission of tuberculosis from the contagious teacher, bus-driver, cook, engineer, et cetera, to children and other members of personnel.

* * * * *

The Health Commentator,—The Washington State Department of Health, Seattle, on October 15 brought out the Health Commentator as its official bulletin. Howard W. Lundy, Dr. P. H., is editor and Semour Standish, Jr., managing editor of the monthly bulletin. *Journal A.M.A.*, Nov. 23, 1946, p. 729.

RESULTS OF FIFTEEN YEARS OF TUBERCULOSIS CONTROL IN RURAL MINNESOTA*

LEWIS S. JORDAN, M.D.
Granite Falls, Minnesota

Inspired by the accomplishments of the work of the Veterinarians in the discovery and eradication of tuberculosis among the cattle by the use of the tuberculin test, it was decided to institute a similar, but modified program in the Riverside Sanatorium district of Minnesota in 1930.

This district with an area of 3800 square miles is located in the south central and western part of the state and is comprised of four large counties, Chippewa, Yellow Medicine, Lac qui Parle and Renville. It has twenty-seven small cities and towns, and approximately 265 rural schools. The tuberculosis control work as planned in 1930 had the following aims:

1. To discover the infected children, so they could be observed throughout their school career and on into young adulthood.
2. To trace wherever possible the source of infection for each child found to be a tuberculin reactor.
3. To eliminate the infective factor, by breaking the contact with the child, preferably by institutionalizing the persons with positive sputum or otherwise controlling their disease.
4. To examine all adult contacts of the children in the schools including teachers, janitors, bus drivers, cooks, office help, etc.
5. To institute a follow up program, checking each tuberculin reactor by x-ray films of the chest at least once each two years, or more often if indicated.
6. To institute an educational program including talks, movies, literature, etc., to reach all lay groups and civic organizations.
7. To obtain 100 per cent cooperation of the state and local medical societies.
8. To aid the veterinarians program of eradication of tuberculosis among animals particularly cattle so no humans would be infected with the bovine type of tubercle bacilli.

With this eight point program as a guide, we started our work. An intensive educational program was begun, to gain the cooperation of schools boards, lay organizations such as Rotary, Kiwanis, Lions, Commercial Clubs, American Legion, Parent Teachers Organizations, Farm Bureau groups, etc. With the backing of

*Presented before the annual meeting of the American School Health Association, November 11, 1946, Cleveland, Ohio.

these organizations and a ruling by our Attorney General *Harry H. Peterson,* "that the Mantoux skin test for teachers and other school employees is a reasonable exercise of police powers of the School Boards, if required for the purpose of safeguarding the health of the pupils of public schools;" our Mantoux surveys were instituted.

School boards could legally require all employees, including teachers, to prove themselves safe to act as guardians of our children during the school hours. Each child was given a blank form to be signed by the parent or guardian, giving consent for the administration of the Mantoux test, and if a reaction occurred an x-ray film of the chest. No test was done without written permission. At the same time it was explained, that it would be necessary to x-ray all reactors, and that if the individual were able to pay, a fee, $1.00 would be charged to partially cover the cost of the film. The additional cost of the entire examination was derived from Christmas seal money. For persons unable to pay, the entire expense was borne by this fund. All reactors were x-rayed regardless of their ability to pay. Care was taken to explain that the $1.00 did not cover the cost of the work and materials, and that the balance was provided by Christmas seal money and the Sanatorium.

Our goal was high even in the early days of the program. We established the rule, that the children of no school would be tested unless consent blanks were returned by a minimum of 80 per cent of the pupils. This, placed the responsibility of the testing program on each community where the work was to be done. Parent-teacher groups, worked hard to obtain the 80 per cent consents. A spirit of rivalry developed between various towns and schools, which practically always assured the success of the program. Every effort was made to retest the schools each two years. Saranac Lake Old Tuberculin 1/1000 strength was used in all our tests. Comparisons of O. T. 1:1000 and P P D were used on certain occasions during the years, as were readings at 48-72-and 96 hour intervals. As a result of our observation, it was decided, that a 72 hour reading is for general purposes in all probability somewhat more accurate than the 48 hour interval, owing to the fact, that it detects some of the so called "delayed reactors," as well as eliminates the possibility of interpreting small areas of erythema due to trauma, etc., as tuberculin reactions.

In every instance diligent search was made to determine where the reactors received the infection. Here our field nurse and the

knowledge of the family physicians proved of great value. In many instances, the source of infection was found in a grandparent, an uncle, an aunt, hired man, etc., who had unsuspected or undiagnosed infectious tuberculosis. During the first several years that this program was conducted in schools, we found twelve teachers with demonstrable pulmonary tuberculosis, of which eight had positive sputum. In one room in one of our larger schools, 42.6 per cent of the pupils reacted to the Mantoux test. The teacher also reacted and the x-ray film of the chest revealed evidence of disease which was proved to represent Far Advanced "B" pulmonary tuberculosis. This teacher died in a sanatorium within sixty days of discovery. Of the pupils who reacted to tuberculin in his room, two developed demonstrable active pulmonary tuberculosis within a year.

All teachers and school employees found to be a menace in so far as tuberculosis infection is concerned were removed from their contact with the children. This work went on yearly with pleasing results. Over 50,000 children were tested and the percentage of tuberculin reactors found in the same schools decreased as the years passed.

The Minnesota Sub-committee on Tuberculosis of the American School Health Association, consists of such persons as Dr. E. A. Meyerding of St. Paul and Dr. S. A. Slater of Worthington, both inspiring leaders and pioneers in this work. In 1943 this Committee prepared standards by which individual schools of whole systems in Minnesota might be certified with reference to tuberculosis. In order for a school to be certified, it must meet these standards which pertained to tuberculosis control work in progress. Those meeting the highest standard were offered Class A certificates, while those with slightly lower qualifications would receive Class B certificates. The requirements for Class "A" certification are briefly as follows:

1. Testing from 95 to 100 per cent of pupils and making x-ray inspections of the chest of all reactors.

2. Testing 100 per cent of the school personnel and inspecting x-ray films of the chest of all reactors. This included teachers, janitors, bus drivers, cooks, clerical help, etc.

3. Completing the examination of all who presented x-ray shadows which might be caused by tuberculosis lesions.

4. Conducting an educational program for the staff of each school, so the principles of tuberculosis control would be understood.

5. All non-reactors to tuberculin to be retested each two years.

6. All reactors to be x-rayed each two years, unless more frequent inspections were especially indicated.

For the class "B" certification, the requirements were exactly the same as for class "A" except that only 80 to 95 per cent of the pupils be tested.

In January 1946, work was begun in an attempt to accredit as many schools as possible under this new program of the American School Health Association. Our work on this program is only ¾ finished, but we are gratified with the results to date. The following table shows the decrease in the percentage of tuberculin reactors observed during the last fifteen years:

	Year	*Percentage Reactors*
Clara City	1935	11.6
	1946	0
Clara City (parochial)	1934	30.5
	1946	0
Boyd	1931	15.6
	1946	0
Bird Island (parochial)	1931	25.7
	1946	0
Bellingham	1935	7.7
	1946	0
Farfax (parochial)	1934	6.9
	1946	0
Milan	1930	18.6
	1946	0
Olivia (parochial)	1934	14.4
	1946	0
Nanau	1937	8.8
	1946	0
Madison (parochial)	1934	8.1
	1946	0
Echo	1931	10.8
	1946	1.3
Marietta	1931	17.9
	1946	1.6
Olivia	1934	11.5
	1946	1.5
Hanley Falls	1932	11.7
	1946	2.5
Fairfax	1934	21.3
	1946	2

Clarkfield	1933	9.6
	1946	2.3
Morton	1934	13.6
	1946	2.9
Franklin	1934	12.2
	1946	3.5
Yellow Med. Co.	1935	8.2
Rural (84 schools)	1946	.9

A summary of our 1946 work towards accrediting all of our schools is as follows:

Number of Schools tested	240
Number of School certified	177
Class "A" certificates awarded	115
Class "B" certificates awarded	62
Number of Schools 100 per cent tested	86
Number of Schools with *No tuberculin Reactors*	153
Number of Children tested	12,450

When this work was begun in 1930 an average of 13.9 per cent of all our school children reacted to tuberculin.

All of our testing has been done with a dilution of 1:1000 Saranac Lake Old Tuberculin.

The percentage of school children tested and the percentage of reactors found in each of our four counties in 1946 is as follows:

	Per cent Tested	*Per cent Reactors*
Yellow Medicine County	91.	1.8
Chippewa County	86.	2.4
Renville County	85.6	1.9
Lac qui Parle County	89.	2.7

In these same counties an average of 13.9 per cent of the children reacted to tuberculin from 1930-1934.

We know from experience that most of our cases of pulmonary tuberculosis in the years to come, will develop among the group of children who are reactors to tuberculin today. Therefore, we believe that not only control but also eradication of tuberculosis can be accomplished by the foregoing program. It is a matter of starting at the "grass roots" to eliminate tuberculosis. In other words, begin with the child to find the infection, then discover its source. Eliminate the fountain head of tubercle bacilli, either by controlling the disease or by hospitalization. Carefully watch the infected children; make x-ray film inspection of their chests annually as they approach and continue in adulthood. If x-ray shadows appear, complete the examination for tuberculosis.

The weapons are *now* in our hands; they must be used with arduous work, to eliminate tuberculosis. The main weapons are, the Mantoux test, the x-ray, and the field nurse. No one of them is adequate. They must be used together to conquer this scourge of mankind. In areas where there is a low incidence of tuberculosis, we feel that the tuberculin testing survey should always come first, the x-ray inspection of the chest can then be limited to the reactors, rather than a mass x-ray program.

When a tuberculin reaction is present, two important facts are immediately established.

1. The individual is at least a potential case of clinical tuberculosis.

2. There has been a source of infection which may be sought and often found among the individual's adult contacts in daily life.

The simple fact, that a person reacts to tuberculin, immediately arouses in him an intense interest in tuberculosis, and he desires information concerning the ultimate outcome of this infection. The logic of periodic examinations including x-ray film inspection of the chest, come to be obvious to him, and his cooperation is easily gained. On the other hand, if only x-ray film inspection is made as is practiced in mass x-ray surveys, and the findings are reported as normal, it is often exceedingly difficult to maintain that individual's interest in subsequent periodic examinations, which may often be indicated. A tuberculin reaction gives us a definite hold on the individual and affords the knowledge that he has been infected. This knowledge alone in most cases assures us of full cooperation thereafter. To us it seems far more important to concentrate our attention on the tuberculin reactors where potential clinical tuberculosis exists, than to devote time, energy and money to making x-ray inspections of the tremendously high number in whom there is no possibility of finding clinical tuberculosis.

We believe, that tuberculosis in rural Minnesota can be eradicated by this method. We also, feel that it would be a tragedy to introduce BCG in an area such as ours. To artificially establish sensitivity of the tissues of all of our citizens would be to destroy our most potent weapon—the tuberculin test. It must be remembered, that in order to develop clinical tuberculosis, infection must first occur. If we eliminate the sources of infection, and carefully watch those few whose tuberculin test show that they have been infected, we have every reason to believe that tuberculosis will be relegated to the same catagory as typhoid fever and smallpox in our entire state within the life span of the coming generation.

ORTHOPTIC TREATMENT—A BENEFICIAL PROCEDURE WHEN PROPERLY USED

FRED C. LARIMORE, M.D.
Ophthalmologist, Board of Education, Pittsburgh, Pennsylvania

One of the questions most frequently asked of eye specialists is this: "Will any kind of exercise improve vision or enable one to get rid of spectacles?" Popular magazine and newspaper articles have been numerous and in many cases somewhat misleading. Few people have the type of education necessary to understand the factors involved and must accept or reject the ideas presented with nothing more than faith to guide them. Thousands of them fall into the hands of men who are able to exploit this field because usually no medicine is necessary and the exercising machines can be purchased by anyone with sufficient funds. This is most unfortunate because all well trained eye surgeons now make use of orthoptic training procedures and anyone, by consulting such men as these, can get the true facts with regard to his own case and be properly guided.

Orthoptics, commonly termed "eye exercises," would more properly be called brain exercises, as most of the orthoptic techniques are directed toward improvement of mental reactions; accelerating response to stimuli in some cases, diminishing excessive response in some, and improving coordination in others. There are three main groups in which orthoptic treatment is useful: phorias, amblyopias without pathology, and tropias of accommodative type or those due to great refractive defects. The group of phorias, comprising those cases of muscle imbalance without actual strabismus, is the class of patients most benefited by proper orthoptic procedure. Many such cases, although perfectly fitted with proper lenses, are never comfortable until they have been treated sufficiently by orthoptics.

The second class of patients in order of amenability to this treatment is that which includes the many individuals who have one eye in which the visual acuity is much poorer than its fellow, even though both have been fitted with proper lenses, and in which there is no demonstrable pathological change. For lack of a better name these cases are called "amblyopia exanopsia." Ofttimes there is strabismus present at the same time. Many of these patients have a considerable difference in the refraction between the two eyes, and very often one eye is almost, if not quite normal. In such cases, if glasses have not been used quite early in life, there is usually no fusion power or possibly first or second degree fusion

with no depth perception. Often there is alternation or suppression of vision in one eye. Often the difference of refraction gives rise to anisiekonia and through lack of fusion to diplopia, even though each eye has its refraction corrected for focus. However, it is surprising how often fusion can be developed by orthoptic training in the presence of a considerable degree of difference in refraction.

The third class mentioned, strabismus of accommodative origin, will often yield to refraction and orthoptics without operation, although operation frequently shortens the time necessary to develop fusion and coordination—older cases requiring correction of false projection. Strabismus cases should have early operation if orthoptic treatment plus proper refraction does not bring quick results. After paralytic or paretic types of strabismus are benefited as much as possible by operation, some visual acuity training work may further improve their comfort.

It is truthfully said that the earlier one begins orthoptics the better are the results. Obviously idealism here, as elsewhere, conflicts with practicability. While many young children can be kept interested in the various ways that orthoptic technicians employ, and while many parents have enough patience and intelligence to do the necessary home work supervision, it is a sad fact that too often these happy circumstances fail to endure after the first few days or weeks when the novelty has worn off. In the case of phorias and amblyopias treatment is quite a prolonged affair lasting months and even years to a degree, and unless cooperation can be sustained, the inauguration of orthoptic courses is bound to be a useless endeavor and might as well be abandoned as soon as lack of cooperation is discovered.

For example, many youngsters who are supposed to be wearing an occluder over one eye all of the time, will take the obstructor off at the first opportunity and replace it before returning home or entering the school room. Casual questioning very frequently reveals that home exercises are omitted for days at a time, sometimes nothing at all being done between office visits. As the main value of the office visits is for analysis and instruction, it is easy to understand that this is useless without the necessary home work.

Orthoptic diagnosis, measurement and instruction can be done by any well trained oculist, but it requires considerable time and in most cases the doctor's time is much too valuable to spend at this type of work. People just cannot afford to pay for the amount of time it takes even if the doctor might have the desire and type

of personality required to do it. Consequently, it must be done by a specially trained technician who, to be really successful, must have extraordinary patience and equanimity. Inasmuch as the underlying factors causing imbalance are so complex and varied, it is obvious that the technician should have a good background of education in biology and physics, anatomy and physiology, neurology and psychology, as well as careful instruction in the special technique of orthoptic diagnosis and training. There are some institutions that now offer well developed training courses for persons qualified to do such work. Many good technicians have been trained individually by ophthalmologists who have a special interest in orthoptics.

A very large proportion of patients requiring orthoptic treatment are not able to meet the financial burden of private service, especially for the prolonged period so often required. The nature of the various techniques is such that several persons may be trained and treated at the same time and in the same room. These and other factors make it an ideal activity to be conducted in clinics, either in hospitals or institutions of public service. Here the cost can be spread over many units with conservation of time and energy.

Actual treatment is carried out in many ways and by the use of many different machines. This is only a manifestation of individual development of generally accepted basic factors. As far as the machines are concerned, it has been said without successful contradiction that most of the useful orthoptic procedures can be carried out with an ordinary stereoscope equipped with clips for inserting prisms, and using suitably prepared stereoscopic cards for targets. However, it cannot be denied that certain of the so-called major amblyoscopes are a great aid in clinic work of this type.

All instrument makers have some special instruments that are preferred by certain workers. The difference in them is usually not very important if they are properly used. A very great variety of activities, pursuing the same common objectives, are necessary to maintain the interest of the younger patients and sometimes that of the older ones as well. Instrument supply houses are quite prolific in meeting the demand for different kinds of supplies required. However, many can be home-made and quite inexpensive. A detailed description of all of these variations of technique would take hundreds of words and is unnecessary in a general discussion of this field.

The great need at this time is for the establishment of more well equipped and well manned orthoptic clinics where busy ophthalmologists may refer their patients for treatment and where the fee can be afforded by persons of ordinary means. In Pittsburgh, there is an excellent clinic of this type in the Eye and Ear Hospital. Also in this city, the Board of Education has for several years operated an eye clinic for school children of parents in the low income group. Orthoptic training and instruction are a part of the work of this clinic where several hundred are treated annually.

In conclusion, orthoptic training is generally accepted by ophthalmologists as a useful method of treatment in many cases of defective eye function. It is not a substitute for surgery in strabismus, but may be a valuable aid to the success of operative procedures and does, alone, cure some cases. The establishment of a great number of low cost clinics for such treatment is the best method of providing the public need. Many false claims of miraculous results are made by a few charlatans who are willing to exploit their patients. However, this unfortunate circumstance does not alter the fact that, in proper hands, valuable results may be obtained in many cases.

* * * * *

Rheumatic Fever and Heart Disease in School Children.—Dublin, Ga., the site of the U. S. Naval Hospital for Rheumatic Fever, seemed well suited for a survey of heart disease in school children, since it is located in one of the Southern states at a latitude of 32.5 degrees and a longitude of 83 degrees. The elevation is 234 feet. The annual rainfall is approximately 50 inches. A cardiac survey of 401 school children in the fifth, sixth, seventh and eighth grades revealed 6 cases of organic heart disease, giving an incidence of 1.5 per cent. Of these, 4 had rheumatic heart disease and 2 had congenital heart disease. The incidence of rheumatic heart disease was found to be 1 per cent for all children examined, 1.26 per cent for white children and 0.60 for Negro children. The incidence of congenital heart disease was 0.5 per cent. The incidence of rheumatic fever was 2 per cent. The incidence in white children was 2.10 per cent and in Negro children 0.06 per cent. Climatologic and socioeconomic factors such as dampness, crowding, inadequate housing, malnutrition and low economic status, which are very important epidemiologically in rheumatic fever and rheumatic heart disease, were found to exist in Dublin, Ga. *Journal A.M.A.*, Nov. 30, 1946, p. 811, abstracted from *American Heart Journal*, St. Louis, Aug. 1946, p. 234.

THE "NUISANCE DISEASES"*

DAVID VAN DER SLICE, M.D., M.S.P.H.
Director of School Health, Flint, Michigan

Ever since the " '90s" when the first school health programs were established in this country there has been considerable concern about the control of the so called "Nuisance Diseases."

These diseases, impetigo, scabies, ringworm of the skin and scalp and pediculosis, are well named for, although they usually do not constitute a serious threat to the health of the school child, they cause him to lose many days from school and often-times this makes the difference between passing and failing his grade.

The nuisance diseases are a source of great annoyance to teachers and principals, and attention to them often consumes an undue amount of time of school health workers. Because the nuisance diseases are responsible for such a great loss of school time the problem is of real concern to the school administrators who look to the school health staff for a more satisfactory program for their control.

Control measures must be directed toward reducing the number of days lost from school, consistent with treatment which is adequate to prevent the further spread of these conditions.

A necessary and important part of the control program is *teacher education* designed to increase the awareness and improve the selection of pupils suspected of having one of the nuisance diseases. Film strips and kodachrome slides illustrating typical cases of these conditions can be shown to teachers at faculty meetings, and the demonstration of actual cases by the school physician can frequently be arranged for. In addition, information about the etiology, methods of spread and other characteristics of the "Nuisance Diseases" can be given to the teachers to increase their general understanding of the problem and of the role they play in the control program.

School exclusion methods are also very important to the program and they must be clearly understood and uniformly carried out to be effective. Printed exclusion forms save teachers time and avoid confusion.

There must be a clear cut delineation of functions, and direct channels should exist between the teacher who recognizes the condition and the person who excludes the child from school in order to assure promptness of isolation, exclusion, and proper notification

*Joint session of The School Health Section and American School Health Association. November 14, 1946.

of parents. The school personnel should not attempt to diagnose, but merely to notify the parent that the child has a condition which may be contagious and to recommend that the child be seen by the family physician before returning to school.

It is here that the breakdown usually occurs, for the children who most frequently have one of the nuisance diseases come from homes with low incomes where medical treatment is delayed or not obtained at all, and the stage is set for prolonged school absences.

With the newer methods of treatment there is seldom an excuse for a prolonged absence from school. The emulsion of benzyl benzoate for the treatment of scabies has made possible a return to school with safety in twenty-four to thirty-six hours, and the use of DDT for the treatment of pediculosis has reduced the necessary loss of time from school to one day.

The problem therefore is largely one of the availability of medical treatment. If treatment facilities for these conditions are not within the reach of the medically needy, part pay or free medical services must be made accessible to those who require them to assure a minimum loss of time from school.

This can be accomplished by the establishment of skin clinics where diagnosis and treatment can be obtained during a certain period of each school day. This clinic might be in a school and staffed by a school physician; it might be at the health department, the treatment being given by the health officer; it might be an outpatient clinic in a hospital or it might be in the offices of private physicians who were paid on a fee basis or salary basis by the schools or health department to give this type of care to the medically needy.

Educational measures for the private physicians to acquaint them with the problems in connection with the "nuisance diseases" and their importance in relation to school attendance are necessary. Local dermatologists and general practitioners could well devote a program of the county medical society to a discussion of the treatment of these conditions and work out cooperatively with public health and school officials satisfactory ways and means of permitting the pupil's return to school with a minimum loss of time yet assuring safety to his classmates.

A method of reporting from the physician to the school makes possible a much closer control over the "Nuisance Diseases." A report form could be printed on a postal card addressed to the school—this report could be given out by the school at the time the child is excluded with a suspected contagious skin condition. The

pupil would take the card to his physician (private or clinic) who, after diagnosis or treatment, would indicate whether the condition were contagious or non-contagious, and estimate when the child might safely return to school.

Some of the conditions would be found to be non-contagious, and others although contagious could be treated, the lesions covered, and the child permitted to return to school immediately with the card signed by the physician. In the event an absence from school was necessary, this could be indicated on the card along with an estimate of the number of days required to complete the treatment and the card mailed to the school.

If at the end of an arbitrary period—say a week, no card had been received, an *attendance officer* would make a call at the pupil's home and take appropriate action; or if the card had been received, but the child had not returned within a week of the estimated date of return to school, the attendance officer would make a call and decide whether the family was purposely neglecting the treatment or whether the family needed assistance in the interpretation of the treatment measures prescribed. If the latter was the case, the attendance officer would recommend a visit by the *Public Health Nurse* who, after an estimate of the case, would either assist the family by explaining or demonstrating how to carry out the treatment prescribed by the physician, or would advise the return of the patient to the physician for further advice and treatment. The nurse would report this home visit to the school in order that the teacher, principal, and attendance officer would receive a progress report.

In summary:

1. Prolonged absences from school due to the "Nuisance Diseases" are no longer necessary, with the advent of new, improved methods of treatment, and should not be tolerated by the schools.

2. An adequate program for the control and the treatment of the "Nuisance Diseases" includes

   a) The training of teachers to recognize these conditions.
   b) Clear cut exclusion policies incorporating teacher participation in the identification, isolation and exclusion of children *suspected* of having "Nuisance Diseases."
   c) The provision of treatment facilities for all cases.
   d) Cooperative planning with the practicing physicians to assure adequate treatment and prompt return to to school.
   e) A method of reporting the physician's findings to the school.

f) The proper use of the attendance department.
g) The occasional use of the Public Health Nurse.

3. If such a program is vigorously prosecuted the "Nuisance Diseases" will no longer demand the lime light as a source of irritation nor require a large portion of the time of health department and school personnel, but will retire to the shadows and assume their proper proportions as a minor entity.

* * * * *

School Well Survey,—The Adams County Health Department recently made a survey of the sanitary condition of 116 school wells. Eighty-nine (75.4%) showed actual contamination or the possibility of such contamination. Features of the survey included testing of the water, examination of well construction, and a study of the source of water.

A drawing was made of each well, showing its location with respect to privies, sewers, drains, cesspools, and septic tanks from which leakage could possibly contaminate the source of the water supply. Further study was made of well construction, wherein defects were noted which would permit dirt, bird droppings, animal pollution and other foreign substances to enter the well.

Upon completion of the survey, assistance was given to the school board of each school in providing water safe from the possibilities of contamination. Immediate action was taken by many of the schools. Sources of contamination were located and structural defects in the wells were corrected. For emergency treatment, a few wells were chlorinated.

A properly constructed well should be built so as to prevent the entrance of surface and shallow-ground water or other surface contamination. Such construction requires a watertight well lining extending for at least eight feet below the ground surface; a pump with a solid base, and no openings which will permit entrance of dirt or other foreign material, and a reinforced concrete platform through which a metal sleeve extends up into the pump base. A properly located well is one which is higher than the surrounding area, and which is distant from any surface or underground source of pollution. The water should be tested periodically to determine its freedom from contamination. *Illinois Health Messenger*, Illinois Department of Public Health, Jan. 1, 1947.

DENTAL HEALTH FOR CHILDREN AND YOUTH

LON W. MORREY, D.D.S.
Secretary American Dental Association

During the past fifty years, the health of the American people has steadily improved. Death rates have lowered, length of life has increased. Infant mortality has lessened and deaths from many communicable diseases have been halved, quartered, and in some instances almost erased. Some of the most dreaded diseases of the past century are but names in books today. Diseases of the heart and cancer remain among our greatest enemies, but science is attacking them with new weapons and new vigor.

In spite of this encouraging progress much remains to be done. Two of our most common diseases, colds and dental decay, still defy the microbe hunters. Indeed, dental caries seems to be gaining ground.

For years, the American Dental Association has waged increasing war on caries and other dental diseases, using dental health education and children's dentistry as its chief weapon. Recently, through its Council on Dental Health, the Association extended its battle front. In 1945, as a first step in its accelerated program, the Association sponsored a dental research bill in Congress. Had this bill, known as S 190 passed, it would have enabled the United States Public Health Service to erect and maintain a National Institute for dental research at Bethesda, Md., provide funds for dental research to public and private institutions. Despite the wide spread approval of the bill and despite the fact that it was passed by the Senate, it did not pass the House. Undoubtedly, a similar bill will be introduced in the New Congress.

The second step in the American Dental Association's public health program consisted of the introduction of another bill in Congress (S 1099) which would have enabled the United States Public Health Service to allocate funds to state health departments for dental education and dental care for children. Unfortunately this bill met much the same fate as the dental research bill. But it too will be reintroduced in the New Congress.

A third step in the Association's campaign against dental disease consists of the establishment of state and local Councils on Dental Health. The activities of these councils are coordinated with those of the Association's national council. Each state and local council on Dental Health will study the dental problems of its community and encourage the establishment of procedures that will solve those problems.

It has been apparent for years that until researchers discover a simple, inexpensive and practical method of preventing dental caries that the best method of controlling the disease lies in early and regular dental attention for children. The Council on Dental Health of the American Dental Association, through its Committee on Dental Health for Children and Youth, is spear-heading the children's dental care movement.

One of the Committee's first activities was the formulation of the following objections for a nationwide dental health program:

Statement of Objectives on Dental Health For Children and Youth

Dental health is known to affect the general health, personal appearance and social adjustment of the individual throughout his lifetime. Since the control of dental caries and other diseases of the mouth can best be accomplished during childhood, the Council on Dental Health recommends the adoption of the following dental health objectives for children and youth:

1. Help every American appreciate the importance of a healthy mouth.
2. Help every American appreciate the relationship of dental health to general health and appearance.
3. Encourage the observance of dental health practices including personal care, professional care, proper diet and oral habits.
4. Enlist the aid of all groups and agencies interested in the promotion of health.
5. Correlate dental health activities with all generalized health programs.
6. Stimulate the development of resources for making dental care available to all children and youth.
7. Stimulate dentists to perform adequate dental service for children.

"To implement these objectives, an outline "Dental Health Program for Elementary and Secondary Schools" is now being prepared by the Dental Health for Children and Youth Committee, Council on Dental Health, American Dental Association. (This Committee is composed of representatives of federal and national educational health, dental, medical and PTA groups). The outline is designed to aid local organizations interested in child health to coordinate their efforts in planning and initiating new school dental health programs or in making programs now in operation more effective."

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EDITORIAL

Of the 43,000,000 school children in America more than 10,000,000 have serious mental or physical handicaps which prevent them from receiving the best our schools can give. Unless the schools provide special educational opportunities these 10,000,000 children will not be able to make normal school progress. Few schools provide these special opportunities. In fact, not many schools have anyone in them who pays any special attention to children needing health care or guidance.

Probably the nurses who serve the schools have as great an opportunity as anyone to help these children, because the nurses have the opportunity to teach teachers, parents and the community at large how to meet the health needs which will help improve the lot of the handicapped children. The nurse cannot do much alone, she can only point the way by which health problems can be solved. She can help the parents understand the need for medical care, that is, if medical care is available. If medical care is not available, the nurse may be able to help convince key people in the community that they must make health care available.

The nurse can help teachers to understand the adjustments the school must make if the children are to gain the most from the assets of their schools. If the school does not have the resources needed for helping the handicapped child, the nurse can help the key persons of the community realize that their school is not functioning as it should.

The nurse can help the child realize the important things he must do to make the most of his own physical capacities. But the child can only do those things which his home and community provide or make possible for his welfare.

But no nurse can do these things unless she has time and training to do them. School nursing is a great profession because children have great potentialities.

Perhaps the time available to do a finished job is the greatest asset of the specialized school nurse. A pupil load of 1,500 elementary school children or 2,000 secondary children should offer opportunity for the full time nurse to produce a really effective school nursing program. This should not mean that she has time to waste in duplicating home visits made by other nurses in a community. Where more than one social or health agency exists some method of informational exchange should be made to function.

School nursing as a specialized profession has many advantages for a nurse, such as regular hours, short weeks, moderately good pay, a chance to work closely with children, parents and teachers. However, for the young, relatively inexperienced public health nurse a generalized family service experience is advisable before settling on a specialty. One of the reasons for this generalized experience is the fact that most merit systems as now advocated in this country, by the official agencies, for administrative positions demand such an experience. However, the broader outlook is to see that all types of experiences are contributory to real growth and understanding. The broader the experience the greater the potentialities of the individual. Each nurse should make whatever she does count for a firmer and better understanding of the work she hopes to accomplish.—*G. E. C.*

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ABSTRACTS AND NOTES

The Safest Milk Is Pasteurized,—To those who by preference or conviction still buy raw milk directly from the farmer, Walter D. Tiedeman, chief of the Department's Bureau of Milk Sanitation, has offered convincing proof that efficient pasteurization is the best known protection against milk-borne disease.

Prompted by recent evidence that there are a few who continue to advocate the use of raw milk, Mr. Tiedeman has issued a statement to the press in which he cites figures from the department records as the strongest argument for pasteurization.

In the twenty-eight years, 1917-1944, he points out, there were 173 milk-borne outbreaks of communicable disease in Upstate New York affecting 10,300 persons; 168 were traced to raw milk.

In several of the five outbreaks attributed to pasteurized milk there was reasonable certainty that contamination, following pasteurization, by a bottling plant employee who had an undiscovered illness was responsible.

In another instance, unrecognized cases of disease on a farm apparently were responsible. Furthermore, the efficiency of the pasteurizing plant had been in question previously, raising doubt as to whether the milk was actually pasteurized. In still another case, the milk was labeled "pasteurized" although the evidence indicated that it had not been pasteurized.

Pasteurization as a means of assuring safety in milk supplies cannot justly be discredited by the conditions mentioned, all of which are extreme exceptions to the rule and in marked minority.

Quoting from Mr. Tiedeman's statement:

"The most important reason for pasteurizing milk is that it provides the surest means of destroying disease bacteria. By no means are all cases of communicable disease chargeable to milk. Nevertheless, the occurrence of over 10,300 cases of milk-borne infection, not including tuberculosis and undulant fever, in twenty-eight years, is no small matter.

"Undulant fever is a seriously disabling disease frequently due to the use of raw milk or cream from herds infected with contagious abortion. Increasing numbers of cases are being discovered in New York State, most of which are believed to have been contracted through the use of raw milk or cream from infected cattle.

"Another important consideration is that pasteurization has contributed to the reduction in infant death rates. In 1925 diarrhea caused the death of 1109 babies under one year, or slightly more than 15 per cent of all infant deaths. Last year the toll of death from this cause had fallen to 174 or 4 per cent of all infant deaths.

"These figures are significant because diarrhea is a condition which may be due to the use of milk contaminated by bacteria from the cow's skin, from soiled utensils and dust. Leading health authorities agree that the sensational decline in deaths from diarrhea among babies is due largely to pasteurization." *Health News*, New York State Department of Health, Dec. 23, 1946.

* * * * *

Typhus Fever,—The city of Los Angeles reported 26 cases of endemic typhus fever by the first of November, 1946, with the anticipation of 36 cases by the end of the year, the greatest number of typhus cases in the history of Los Angeles in any year.

This disease, endemic or murine typhus fever, is transmitted

to man from rats by the bite of the rat flea. The fleas leave the body of sick or dead rats and carry the infection to man. This disease is usually not fatal, but may have serious consequences. The occurrence of endemic typhus is an indication of the rat population of the city and hence the potential danger of an outbreak of plague, infectious jaundice and other rat-borne diseases. Typhus fever has to a large extent been confined to the southwestern portion of the United States. Occasionally a case has been reported in Illinois, but usually the report was questionable.

However, the danger of all rat-borne diseases should always be considered. The number of rats in Illinois is estimated to be the same as the human population of the state. Besides being disease carriers, rats also devour vast amounts of grain, poultry, and food products on farms, in stores and warehouses, causing a large economic loss, estimated for the United States at $2,500,000,000 annually. Occasionally rats bite children and cause an infection. They are filthy creature which should be destroyed.

The most effective method of getting rid of rats is to destroy them and to eliminate their breeding places and food supplies. Build them out, kill them out, starve them out. The rats themselves may be killed by various commercial rat poisons, the old familiar red squill, the newer ANTU, 1080, and other poisons. Recently the Farm Bureau in this state sponsored rat-killing throughout the rural areas of the state and assisted the farmers in their fight against rats. The fleas which carry the typhus may be killed by dusting the rat runs with D.D.T.

To cut off the food supply of rats, all food in stores and homes should be kept covered and in containers which the rat will not gnaw through. Garbage likewise should be so protected when set out for future disposal. Actual disposal of garbage on a large scale should be done by the sanitary land fill method* or other suitable methods which prevent the rat from gaining access to this source of food. In rural areas, all garbage and refuse should be burned or buried. Rat-proofing of all buildings, consisting of the extensive use of concrete, brick, metal, and heavy screening, will not only keep the rat from a source of food, but will eliminate breeding places and keep the rat from contact with man.

Ordinary good housekeeping is a factor in reducing the number of rats. Rats will breed in rubbish and debris. Elimination of such debris in yards, basements, barns, under porches, and other convenient locations will prove to be worth the effort in the fight against the rat.

*See "Sanitary Land Fill" Oct. 1, 1946 Issue, *Illinois Health Messenger.*

Destroy the rat, eliminate breeding places, and cut off his food supply—if all the citizens join together in accomplishing these things, they shall be rewarded by better health and an improved economy. *Illinois Health Messenger,* Illinois Department of Public Health, Jan. 1, 1947.

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Accidental Deaths Increase in 1946,—Our first full postwar year witnessed an increase of about 3,000 in the number of deaths resulting from accidents of all kinds. It is estimated, on the basis of incomplete information now available, that the accident toll in the United States in 1946 was approximately 99,000 lives, as compared with about 96,000 in 1945.

The greater frequency of accidental death in 1946 was due largely to an increase in the number of fatalities from motor vehicle accidents. The sharp upswing in motor vehicle deaths which began after V-J Day, when gasoline rationing ended, continued into 1946. Present indications are that the loss of life in such accidents totaled around 34,000 in 1946, fully 6,000 more than in the year before. In addition, there was probably some increase in the number of deaths both from home accidents and from public accidents not involving a motor vehicle. On the other hand there was a substantial reduction in the number of deaths of military personnel in the United States as the natural result of the rapid demobilization of the forces. These men, on return to civilian life, are exposed to materially less hazard than in their previous military service. Occupational accidents claimed approximately the same number of persons in 1946 as in the preceding year.

Records compiled by the Metropolitan Life Insurance Company show that, up to the closing week of the year, catastrophes—those accidents which take at least five lives—were less frequent and claimed fewer lives in 1946 than in 1945. The total figure for 1946 is around 1,300 deaths, or about 400 less than in the year before, and is the lowest since 1941. The decline in the past year has been due largely to a reduction in the number of victims in service flying crashes. There were also fewer lives lost from catastrophic accidents in water transportation and mines; tornadoes likewise caused fewer deaths. However, catastrophes due to chartered commercial air transportation and to conflagrations in hotels and in homes, took a larger toll of life in 1946 than in 1945. Oddly enough, the number of deaths from motor vehicle accidents in which five or more persons were killed, was about the same in both years. There were, however, fewer lives lost in major bus accidents in 1946.

Heading the list of catastrophes in 1946 were two hotel fires—one in Georgia, in December, with at least 119 fatalities, and another in Illinois, in June, with 61 fatalities. The Georgia hotel holocaust, in point of lives lost, was the worst in the history of American hotels. Two other major hotel fires occurred during the year, both in June—one in Iowa in which 19 lives were lost, and one in Texas which took 10 lives. Early in December, 38 persons were killed in a New York tenement which was partially demolished by the falling wall of an adjacent building loosened by a fire. A railroad train collision in Illinois, in April, killed 46 persons. Tornadoes in east Texas early in January caused 33 deaths. Twenty-seven persons died in crashes of a scheduled commercial air liner in California in March, and of a chartered plane in Virginia in May. There were at least four military plane accidents during the year in which 25 or more persons were killed. *Statistical Bulletin*, Metropolitan Life Insurance Co., Dec., 1946.

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Medical Supervision of Schools in the Congo,—A plan is taking shape which is truly beneficial from the point of view both of hygiene in general and particularly of the health of our colonial pupils. From now on all the educational establishments of the Belgian Congo and of its annexed territories of Ruanda-Urundi are to be subject to regular medical inspection. This service is assigned to the physicians of the government and to those who are approved by the governor of each province or by the governor of Ruanda-Urundi. In the schools for Europeans the students are examined at the beginning of the school term. Those whose state of health requires special supervision or who are especially designated by the master of the school or by other members of the teaching staff are re-examined by the medical inspector. The premises likewise are the object of annual inspection. The doctors in charge of these investigations have the right to order measures to be taken if contagious diseases arise. They must make sure that a medical record is kept of each student, they are to exercise medical control over sports, and in the boarding houses and boarding schools they are to supervise the diet. In the schools for the natives, the medical inspectors likewise proceed with the annual examination not only of the pupils but also of the buildings, annexes and furnishings. The keeping of the medical record cards for each individual must be a rule in large groups. The diet and sports likewise should not escape medical inspection. *Journal A.M.A.*, Nov. 30, 1946, p. 808.

Sun Glasses,—*To the Editor:*—Please discuss the harmful or beneficial effects on the eyes of the average sun glasses sold in drug stores and dime stores throughout the country.—*Paul N. Taylor, M.D., Washington, D. C.*

Answer.—Many poorly fitting and cheap glasses cause ocular distress and headaches; a person who has such distress when he wears glasses naturally takes them off, just as a man takes off a pair of shoes that do not fit him comfortably.

The light from which our eyes are protected by "sun glasses" may be considered as follows: (a) Sunlight: Very bright sunlight is distressing in varying degrees to all eyes. This is the reason why the eyelids are kept closed, or nearly closed, when one is facing such a light. (b) Ultraviolet: Ultraviolet light of the wavelength of approximately 300 millimicrons such as is present in a rarefied atmosphere on high mountains or in dense snow fields, or such as comes from arc lights or welding machinery, causes irritation and temporary inflammation of the superficial cornea and conjunctiva, coming on eight to twenty-four hours after exposure and lasting a day or more. Welders, for instance, are protected by special goggles. (c) Infra-Red: Eclipse blindness is a burn of the macular area, a result of the infra-red rays, and comes on immediately and is permanent. Smoked glasses are used to prevent this in those who wish to look at an eclipse. (d) Glare: Almost all of us are made uncomfortable by "glare"; but pathological lesions produced by "glare" have not yet been found.

The average sun glasses, obtained in drug and ten cent stores, if sufficiently dark, are as a rule comforting to the eyes of the average wearer on an average bright day, on the water or on the beach where they are usually used. They reduce the total amount of light entering the eyes. The idea that certain makes of glass do not transmit the "harmful" ultraviolet light is mostly sales talk, as the ordinary white glass allows but little ultraviolet light to pass through. In fact, in order to obtain passage for ultraviolet through a window pane it has to be specially made for that purpose. A certain amount of ultraviolet light is beneficial to the eyes; it is for this reason that vacations are taken at the seashore and in the mountains, and in the winter patients are sent to sunny climes. *Journal A.M.A.*, December 7, 1946, p. 893.

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Environment and Physique,—The relation between environment in the broad sense and the physical development of human beings has been the subject of many scientific studies and much speculation. Recently Lasker[1] made physical measurements on 284

adult Chinese, 97 of whom were Cantonese immigrants, 48 American born Chinese of Cantonese extraction, 5 Hawaiian born Chinese, 9 Cantonese born elsewhere and the remainder from other parts of China. The standard methods of examination described by Martin[2] were followed, with a few exceptions. Certain differences in physique of Chinese men born and raised in the United States were found as compared with Chinese immigrants born in China. These differences included an increase in the stature and in all the measurements correlated with stature, such as trunk and limbs, other than chest depth. The thoracic, brachial, hand and foot indexes tended to be lower in the Chinese of American birth. The American born Chinese had wider and shorter heads and longer, narrower, higher noses and longer faces. Lasker concluded that the typical oriental youth brought up or born in the United States or Hawaii differed from immigrants of like stock in what he calls an "environmental growth factor." The former is taller with longer arms and legs, relatively smaller hands and feet and flatter chest. His head is likely to be shorter but broader and the nose relatively narrower. More body hair is in evidence. The changes noted in the Chinese born in the United States seem to reflect a process caused by changed diet or other factors incident to the migration of peoples. Whether such physical changes as exist are due primarily to diet, to climate or to other environmental factors would be interesting to investigate though extremely difficult to determine. *Journ. A.M.A.*, December 7, 1946, p. 862.

1. Lasker, Gabriel Ward: Migration and Physical Differentiation, Am. J. Phys. Anthrop. 4: 273 (Sept.) 1946.
2. Martin, Rudolf: Lehrbuch der Anthropologie, ed. 2, Jena, 1928.

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Vaccination Required for All Dogs.—To stop the spread of rabies through the city of New York the Board of Health decided early in December to require by law the vaccination of all dogs in the city. An amendment to the sanitary code would make it a misdemeanor to keep a dog unvaccinated against rabies, and violation of the amendment would be punishable by a $500 fine or imprisonment up to one year or both. Enforcement of the new amendment in the case of 300,000 licensed dogs in the city will be comparatively easy by merely requiring proof of vaccination to get a dog license. The spread of rabies has forced the Board of Health to put Queens, Brooklyn and Richmond under the dog quarantine, and Health Commissioner Israel Weinstein believes that "it is only a question of time before infection will spread to Manhattan and the Bronx." *Journal A.M.A.*, Jan. 11, 1947, p. 116.

School Health Program,—The State Board of Health of Florida plans to conduct a special school health examination and immunization program which will reach 40,000 children before July 1. A special grant of $70,000 from the federal Children's Bureau to conduct the program was obtained by Dr. Wilson T. Sowder, Jacksonville, state health officer. Twenty-five young doctors under the supervision of Dr. Grace Hardy, pediatrician, have consented to enter the field. Defective sight, hearing, posture and mild nutrition deficiencies which show up in the skin will be particular objectives of the campaign. Cases will be referred to private physicians and to the crippled children's commission. Most of the work is to be carried on in counties where county health department personnel is inadequate. *Journal A.M.A.*, Feb. 22, 1947, p. 561.

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Child Health Director,—Dr. Isabel Morgan, Ann Arbor, Mich., who has been on the staff of the School of Public Health at the University of Michigan for the past two years, has been appointed Director of the Division of Maternal and Child Health, State Health Department of West Virginia, effective February 1. Dr. Norman G. Angstadt, Charleston, has been acting director of the division since the resignation of Dr. Lenore Chipman, Williamstown, Ky., in 1944. Dr. Angstadt has resigned to accept appointment as director of the Department of Medical Supervision of the school district of Reading, Pa. *Journal A.M.A.*, Feb. 2, 1947, p. 563.

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School Health Education,—A questionnaire entitled "Inventory of Secondary School Health Education Program in West Virginia" has been prepared and mailed to all principals of high schools in West Virginia. The committee submitting the inventory is composed of Miss Katherine Steinbicker, state consultant for the community health service project, department of education, Mrs. Grayce Hoke, Mr. A. J. Gibson and Mr. L. K. Lovenstein. The replies to the questionnaire will be used in setting up comprehensive objectives and in implementing a health education program to meet the needs and interests of high school students in the state. *Journ. A.M.A.*, Feb. 15, 1947, p. 491.

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Diphtheria in Recent Years,—Reviewing 573 cases of diphtheria from the period between 1939 and 1945, Mortensen finds that diphtheria has been more frequent in 1944 and 1945 than during the preceding years. The age distribution has shifted in that in 1944-1945 only about one-third of all the patients were children, as against about three-fourths in the preceding years. Antidiphtheric

vaccination has protected the children. The case mortality was 9.3 per cent for the nonvaccinated patients and 1.1 per cent for the vaccinated. The disease was milder in the vaccinated patients than in the nonvaccinated, and complications were far more frequent in the latter. Among the factors that contributed to the rise in diphtheria morbidity the author mentions greater possibilities of infection owing to poor hygienic conditions during the war and lowered resistance in the last years of the war. *Journal A.M.A.*, Feb. 15, 1947, p. 504. Abstracted from *Acta Medica Scandinavica*, Stockholm, Aug. 31, 1946.

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Nurses' Positions,—A statewide open-competitive examination for Public Health Nurse will be held some time in April, 1947, to fill vacancies in various counties. There are at present 148 positions available in 33 counties. Entrance salaries range up to $2400.

Candidates must be graduates of an approved school of professional nursing. In addition, they must have completed an approved one year program of instruction in public health nursing, or they must have a combination of public health nursing experience and special training which in the opinion of the Public Health Council is equivalent to the year's course.

Applications must be filed with the State Department of Civil Service, Albany, New York, not later than March 21, 1947.

Apply to State Department of Civil Service, Albany 1, New York, requesting application forms and a detailed announcement. A return self-addressed envelope bearing 6¢ postage should be enclosed with this request.

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Short Course in Health Education,—The University of Washington is offering an intensive short-course in Health Education during the first two weeks of the 1947 summer session. The course will be under the direction of Dr. Dorothy Nyswander of the School of Public Health, University of California and is being offered by the Department of Preventive Medicine and Public Health of the School of Medicine in cooperation with the College of Education, School of Nursing Education and the Departments of Health and Physical Education for Men and Women. Dr. Nyswander is well known for her many publications in the field of Health Education.

The lectures and seminars will be of special interest to classroom school teachers, school administrators, special teachers of health subjects and public health nurses. The course will begin on June 23, 1947 and will end July 3, 1947. The fee will be $12.00 and will carry three hours of credit.

REVIEWS

Scoliosis: A Practical Approach to Treatment. *Beatrice Woodcock;* Stanford University Press, 1946; pp. 111; price $2.00.

The author—a physical therapist—holds an extremely optimistic view of the possibilities of improvement of this deformity, under scientific and prolonged treatment.

Part I is devoted to a discussion of what scoliosis is, and of the changes that take place in the body structures when this condition exists.

Part II is concerned with the gymnastic treatment—mostly active but some passive exercises. She brings out, incidentally, the harmful effects on spinal rotation—especially if there is already a slight amount present—of one sided athletics where the arm on one side is used almost exclusively—as in tennis—unless the person is trained to use the hands alternately.

The text is made more interesting and instructive by numerous illustrations of conditions and exercises.—*Charles H. Keene.*

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Hygiene: A Textbook for College Students. *Meredith, Florence L.;* The Blakeston Co.; Fourth Edition, 1946, pp. 838; price $4.00.

This revised text, designed particularly to appeal to the pupil at the college level, considers first the Health Situation in the United States, then medical science, problems of infection, other major health problems, accidents and poisoning. The latter half is devoted to discussions of the Hygiene of Everyday Life, Reproduction and Mental Health. It is supported by a Bibliography divided according to the above sections.

This is a well organized, modern text, interestingly written.

—*Charles H. Keene.*

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MEETINGS

The American School Health Association with the American Public Health Association at Atlantic City, N. J., October 5-9, 1947. The change of date from that given in the February issue is due to the fact that the Executive Committee of the American Public Health Association voted to change to the October date.

National Conference (3rd) on Health in Colleges, New York, N. Y., May 7-10, 1947.

The American Association for Health, Physical Education and Recreation, Seattle, Wash., April 21-26, 1947.

National Tuberculosis Association, San Francisco, Calif., June 15-20, 1947.